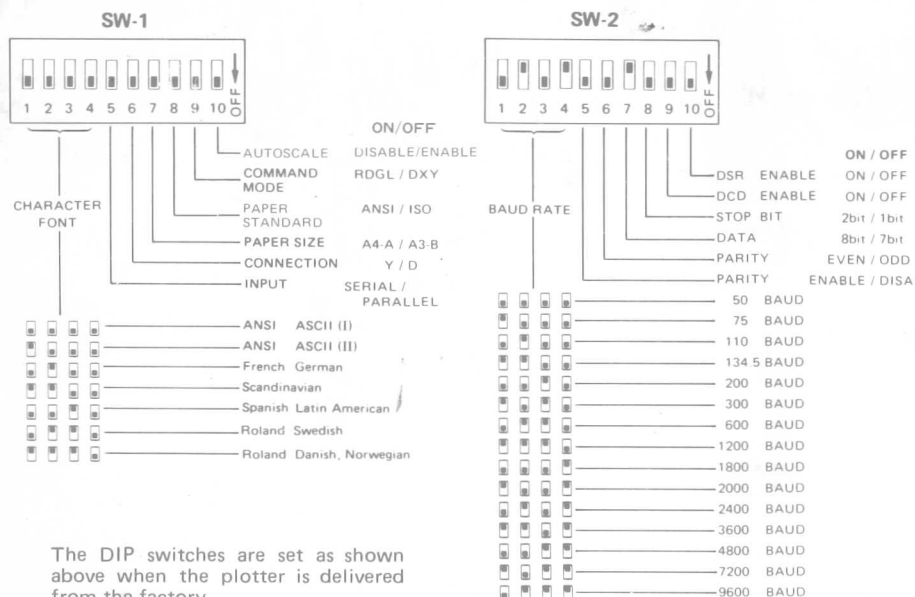


DXY-880/DXY-980 OPERATION REFERENCE TABLE

Note: Functions marked with an asterisk (*) are supported only by the DXY-980 plotter.

DIP switch setting list



The DIP switches are set as shown above when the plotter is delivered from the factory.

SW-1			Paper size	Max. Plotting size
7	8	9		
OFF A3	OFF ISO	OFF DXY	420x297 mm	380x270mm
ON A4	OFF ISO	OFF DXY	297x210mm	270x192mm
OFF B	ON ANSI	OFF DXY	17x11inch	380x258mm
ON A	ON ANSI	OFF DXY	11x8.5inch	258x198mm
OFF A3	OFF ISO	ON RD-GL	420x297mm	380x270mm
ON A4	OFF ISO	ON RD-GL	297x210mm	270x192mm
OFF B	ON ANSI	ON RD-GL	17x11inch	380x258mm
ON A	ON ANSI	ON RD-GL	11x8.5inch	258x198mm*

Mode table

Mode	Function	To set (to cancel)
Self-test mode	This mode allows a check of operation before the plotter is connected to the computer. Use this mode when operating the plotter for the first time, or to identify whether a malfunction is occurring on the computer side or the plotter side.	Turn ON the power switch while pressing the [ENTER] key on the control panel. (After the self-test run, the plotter will automatically enter the normal mode.)
Printer mode	The printer mode prints characters as a printer does. It can be used to prepare program lists. If a program is executed in this mode, all of the commands and parameters to the plotter will be printed. This is very useful for program debugging.	Turn ON the power switch while pressing the [HOME] key on the control panel. (Turn OFF then ON the power switch.)
Non-buffer mode	The mode sets the plotter to its non-buffer state. When program debugging in this mode setting, the plotter will stop with the computer stopping. This permits location of the address at which the error occurred.	Turn ON the power switch while pressing the [] key on the control panel. (Turn the power switch OFF and then ON.)
Reduced speed mode (OHP mode)	The maximum pen speed which can be set by commands is 80mm/sec. This mode is set when a commercial program is used to draw with ink pens, ceramic pens, or pens for overhead projector transparencies. The ink density will suffer if the pen speed is not reduced for ink or ceramic pens, or when drawing on transparencies with pens for that purpose. When using your own program, the pen speed can be set with the "VS" command. However, since commercial programs cannot modified, this mode must be used to reduce the pen speed.	Turn ON the power switch while pressing the [FAST] key or the [V] key on the control panel. (Turn the power switch OFF and then ON.)
DXY mode	This mode is controlled by the DXY commands which are used with the Roland's DXY plotter Series. Most of the commands are independent, allowing graphics programs to be easily created.	Set No. 9 of DIP switch 1 at the rear panel to OFF and turn ON the power switch. (Reset the DIP switch and turn the power switch ON again.)
RD-GL mode	RD-GL commands are used in RD-GL mode. This mode permits fine setting of each movement of the plotter, and support high-level graphics functions such as reduction and enlargement. The RD-GL command system is compatible to the Hewlett-Packard graphics language.	Set No. 9 of DIP switch 1 at the rear panel to ON, and turn the power switch ON. (Re-set the DIP switch and turn the power switch ON again.)
Monitor mode	When the plotter is connected serially (RS-232C) between the computer and terminal, it will ignore and pass all data until the ESC command is specified. This is a special operating method and is not normally used.	Set No. 6 of DIP switch 1 at the rear panel to ON, and turn ON the power switch. (Reset the DIP switch and turn the power switch ON again.)
Auto scale mode	Usually set No. 10 of DIP switch 1 to OFF. This mode permits reducing the size by only setting P1 and P2 with IP command or manual operation. When No. 10 of DIP switch 1 is ON (non-auto scale mode), the reduction of the size. Can't be done until SC command is executed.	Set No. 10 of DIP switch 1 at the rear panel to OFF, and turn ON the power switch.

• DXY Commands

Command	Format	Parameter	Parameter range (default value)	Function
H	Home	H		Coordinate original position
D	Draw	DX1, Y1... Xn, Yn	Xn: X axis (horizontal) coordinate, Yn: Y axis (vertical) coordinate	Draws a straight line
M	Move	MX, Y		Moves in a pen up condition
I	Relative draw	IΔX1, ΔY1... ΔXn, ΔYn	ΔXn: relative difference in X coordinate, ΔYn: relative difference in Y coordinate	Draws a line between relative coordinates
R	Relative move	RΔX, ΔY		Same movement as the "I" command in a pen up condition
L	Line type	Lp	p=0: solid line p=1,2: dotted line p=3,4: single dot-dash line p=5: double dot-dash line	Designates a line type
B	Line scale	Bℓ	ℓ: pitch of dotted line	Designates the pitch of dotted line
X	Axis	Xp, q, r	p=0: Y axis p=1: X axis q: scale spacing r: number of repetitions	Draws coordinate axis
P	Print	Pc1, c2... cn	c1... cn: character string	Prints character
S	Alpha scale	Sn	n: character size	Designates character size
Q	Alpha rotate	Qn	n: angle (90° unit)	Designates rotation angle of characters
N	Mark	Nn	n: 1 to 15	Draws marks
J	Pen change	Jn	n: pen number	Designates pen change
C	Circle	CX, Y, r, θ1, θ2 (, θd)	X, Y: coordinates of center r: radius θ1: initial angle θ2: final angle θd: Resolution	Draws circles and arcs
E	Relative circle	Er, θ1, θ2 (, θd)		Draw circles and arcs starting from the current pen position
A	Circle center	AX, Y		Designates the center coordinates for the G and K commands
G	A + Circle	Gr, θ1, θ2 (, θd)		Draws a circle arc around the position designated by the A command.
K	A + %	Knℓ1, ℓ2	n: percentage with respect to 0% of the uppermost part ℓ1: distance of the end point from the center ℓ2: distance of the starting point from the center	Draws division lines and extraction lines for circles.
T	Hatching	Tn, X, Y, d, t	n=1: hatching only n=2: boxes only n=3: hatching and boxes X, Y: X axis and Y axis lengths d: spacing between hatching t: hatching angle	Draws hatching or quadrangles
★	Y	Ym, X1, Y1, X2, Y2, ... Xn, Yn	m=0: Open curve m=1: Closed curve	Curve drawing between absolute coordinates
			m=2: Open curve m=3: Closed curve	Curve drawing from the current pen position to the relative coordinates
★	Relative Curve	—m, ΔX1, ΔY1, ΔX2, ΔY2, ... ΔXn, ΔYn	m=0: Open curve m=1: closed curve ΔXn: relative difference in X coordinate ΔYn: relative difference in Y coordinate	Curve drawing from the first coordinates to the relative coordinates
Call RD-GL command		⌒ [RD-GL command] [parameter] ... (, [parameter]) [terminator (,)]		Calls RD-GL command from DXY mode

• RD-GL Commands

Command	Format
AA	Arc Absolute AA X, Y, θc (, θd);
AR	Arc Relative AR ΔX, ΔY, θc (, θd);
CA	Alternate Character Set CA; CAn;
CI	Circle CI r (, θd);
CP	Character Plot CP; CPnX, nY;
CS	Standard Character Set CS; CSn;
DC	Digitize Clear DC;
DF	Default DF;
DI	Absolute Direction DI; DI run, rise;
DP	Digitize Point DP;
DR	Relative Direction DR; DR run, rise;
DT	Define Terminator DT c;
EA	Edge Rectangle Absolute EA X, Y;
ER	Edge Rectangle Relative ER X, Y;
EW	Edge Wedge EW r, θ1, θc (, θd);
FT	Fill Type FT n, d, θ;
IM	Input Mask IM; IME;
IN	Initialize IN;
IP	Input P1 & P2 IPP1x, P1y, P2x, P2y;
IW	Input Window IW X1, Y1, X2, Y2;
LB	Label LB c1, c2 ... on CHR\$ (3)
LT	Line Type LT; LTn, p;
OA	Output Actual Position OA;

Note: Functions marked with an asterisk (★) are supported only by the DXY-980 plotter.

Parameters	Parameter range (default value)	Function
X: X coordinate of center Y: Y coordinate of center θc : Center angle θd : Resolution	X, Y: -31200 to +31200 θc : -360° to +360° θd : 1° to 179.9999°(5)	Draws an arc centered at X, Y
ΔX : Difference of X center coordinates ΔY : Difference of Y center coordinates θc : Center angle θd : Resolution	X, Y: -31200 to +31200 θc : -360° to +360° θd : 1° to 179.9999°(5)	Draws an arc centered at the relative coordinates X, Y
n: character set number	n=0 to 15(0)	Designates the alternate character set
r: Radius θd : Resolution	r: -32767 to +32767 θd : 1° to 179.9999°(5)	Draws a circle from the current pen position
nx: number of characters in X direction ny: number of characters in Y direction	-127 to +127	The pen is moved by the number of characters.
n: character set number	n=0 to 15(0)	Designates the standard character set
None		Digitize end command
None		Default
run=0 horizontal printing rise=0 vertical printing	-127 to +127 (run=0, rise=1)	Designates absolute printing direction
None		Digitize command
run=0 horizontal printing rise=0 vertical printing	-127 to +127 (run=0, rise=1)	Designates relative printing direction
c: character	Other than null character (CHR\$(3))	Defines the terminator
X: X coordinate of corner Y: Y coordinate of corner	-32767 to +32767	Draws a rectangle
X: X coordinate of corner Y: Y coordinate of corner	-32767 to +32767	Draws a rectangle with relative coordinates
r: Radius $\theta 1$: Start angle θc : Center angle θd : Resolution	r: -32767 to +32767 $\theta 1$: -360° to +360° θc : -360° to +360° θd : 1° to 179.9999°(5)	Draws a wedge
n=1, 2: Fill in both directions n=3: Hatching n=4: Cross hatching d: Hatching spacing θ : Hatching angle	n=1 to 4 d=0 to 32767 θ : -360° to +360°	Specifies hatching
		Input mask
None		Initialization
X and Y coordinates of P1 and P2	Depend on paper size mode of DIP SW setting	Sets P1 and P2
X1 and Y1 are coordinates of the left lower corner of the drawing area, X2 and Y2 are coordinates of the right upper corner.	Same as above	Sets plotting area
c: character string		Character drawing
n: pattern No. p: pitch (%)	n=-6 to +6 (0) p=0 to 127 (1.5)	Pitch of dotted or dot-dash-line
None		Outputs X and Y coordinates of pen position and pen condition (for plotter coordinates only)

Command	Format	Parameter	Parameter range (default value)	Function
OC	Output Commanded Position	OC;	None	Outputs X and Y coordinates of pen position and pen condition (for user coordinates only)
OD	Output Digitize	OD;	None	Outputs digitize coordinates
OE	Output Error	OE;	None	Outputs error code
OP	Output P1 and P2	OP;	None	Outputs P1 and P2
OS	Output Status	OS;	None	Outputs status byte
OW	Output Window	OW;	None	Outputs coordinates of lower left corner and upper right corner of window
PA	Plot Absolute	PA; PAX1, Y1, Xn, Yn;	Absolute X and Y coordinates	Moves in absolute coordinates
PD	Pen Down	PD; PDX1, Y1, Xn, Yn;	X and Y coordinates	Moves in a pen down condition
PR	Plot Relative	PR; PRX1, Y1, Xn, Yn;	Relative X and Y coordinates	Moves in relative coordinates
PT	Pen Thickness	PT; PT d;	d: Pen Thickness (mm)	Specifies the filling spacing
PU	Pen Up	PU; PUX1, Y1, Xn, Yn;	X and Y coordinates	Moves in a pen up condition
RA	Shade Rectangle Absolute	RA X, Y;	X: X coordinate of corner Y: Y coordinate of corner	Fills a rectangle
RR	Shade Rectangle Relative	RR X, Y;	X: X coordinate of corner Y: Y coordinate of corner	Fills a rectangle using relative coordinates
SA	Select Alternate Set	SA;		Designates alternate character set
SC	Scale	SC Xmin, Xmax, Ymin, Ymax;	Xmin, Ymin . . . coordinates of P1 Xmax, Ymax . . . coordinates of P2	Depends on paper size and mode setting of DIP SW. Sets user coordinates
SI	Absolute Character Size	SI; SIw, h;	w: character width (cm) h: character height (cm)	(w=0.19 h=0.27) Designates absolute character size
SL	Character Slant	SL; SL tan θ	tan θ : character slant	-127 to +127 (0) Designates character slant
SM	Symbol Mode	SM; SM k;	k: character or symbol	Draws characters or symbols around the current pen position
SP	Pen Select	SP n;	n: pen number	n=0 to 8 (0) Pen change
SR	Relative Character Size	SR; SR w, h;	w: character width (%) h: character height (%)	(w=0.5 h=1.0) Designates relative character size
SS	Select Standard Set	SS;		Designates stand character set
TL	Tick Length	TL; TL ℓ ;	ℓ : tick length (%)	ℓ =-127 to +127 (4) Sets XT and YT tick
UC	User Defined Character	UC; UC Δ X1, Y1 . . . Xn, Yn;	Xn: number of X grids Yn: number of Y grids	-99 to +99 Defines user characters
VS	Velocity Select	VS S;	S: pen speed (cm/sec)	2 to 25 (20) *2 to 23 (23) Sets pen speed
WG	Shade Wedge	WG r, $\theta 1$, θc ;	r: Radius $\theta 1$: Start angle θc : Center angle	r: -32767 to +32767 $\theta 1$: -360° to +360° θc : -360° to +360° Fills a wedge
XT	X-tick	XT;	None	Draws tick on X axis
YT	Y-tick	YT;	None	Draws tick on Y axis

Character Code Table

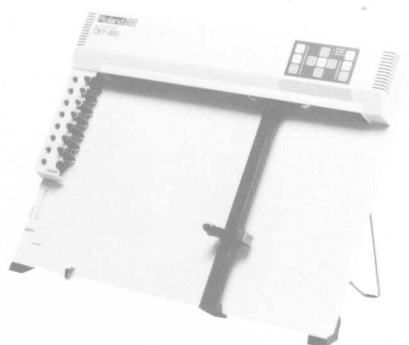
Character set																
ASCII																
	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0				0	③	P	⑨	p		I		ー	タ	ミ		℥
1			!	1	A	Q	a	q		K	.	ア	チ	ム	a	ρ
2			"	2	B	R	b	r		Λ	「	イ	ツ	メ	β	σ
3	ETX		①	3	C	S	c	s		M	」	ウ	テ	モ	γ	τ
4			\$	4	D	T	d	t		N	、	エ	ト	ヤ	δ	υ
5			%	5	E	U	e	u		Ξ	・	オ	ナ	ユ	ε	φ
6			&	6	F	V	f	v		O	ヲ	カ	ニ	ヨ	ζ	χ
7			②	7	G	W	g	w		Π	ア	キ	ヌ	ラ	η	φ
8	BS		(	8	H	X	h	x	A	P	イ	ク	ネ	リ	θ	ω
9			)	9	I	Y	i	y	B	Σ	ウ	ケ	ノ	ル	ι	
A	LF		*	:	J	Z	j	z	Γ	T	エ	コ	ハ	レ	κ	
B	VT		+	;	K	④	k	④	Δ	↑	オ	サ	ヒ	ロ	λ	
C			,	<	L	⑤	l	⑤	E	Φ	ヤ	シ	フ	ワ	μ	
D	CR		-	=	M	⑥	m	⑥	Z	X	ユ	ス	ヘ	ソ	ν	
E	SO		.	>	N	⑦	n	⑦	H	Ψ	ヨ	セ	ホ		ξ	
F	SI		/	?	O	⑧	o	⑧	Θ	Ω	ヅ	ソ	マ	.	ο	

International Character Set

type set	①	②	③	④	⑤	⑥	⑦	⑧	⑨	A	B	C	D
(0):ANSI ASCII (I)	#	'	@	[	\	]	^	_	`	{		}	~
(1):ANSI ASCII (II)	#	'	@	[	√	]	↑	□	□	π	↑	→	~
(2):French/German	£	□	@	[	ç	]	^	□	□	□	□	□	□
(3):Scandinavian	£	'	@	Ø	Æ	ø	æ	□	□	□	□	□	□
(4):Spanish/Latin	¿	□	@	[	¡	]	^	□	□	□	□	□	□
(6):Swedish	#	'	É	Ä	Ö	Å	Ü	_	é	ä	ö	å	ü
(7):Danish/Norwegian	#	'	@	Æ	Ø	Å	Ü	_	æ	ø	å	ü	
(13):Japanese	ASCII codes 20 (H) to 5F (H) are set to characters of A0 (H) to DF (H). ASCII codes 60 (H) to 7F (H) are set to characters of blank.												
(15):Mark	ASCII codes 41 (H) to 4F (H) (A to O) are set to the following marks. A B C D E F G H I J K L M N O □ ○ △ + × ◇ ♣ × Z Y ✕ * Σ I ☆												

Characters in the [] have the automatic backspace feature.

Roland DG
ROLAND DG CORPORATION



• DXY-880



• DXY-980